

Form PTO-1449  
(Rev. 8-83)U.S. DEPARTMENT OF COMMERCE  
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## APPLICANT:

Torp et al.

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ART UNIT:

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A	US-5800356-A	09-1998	Criton et al.			
	B	US-5474070-A	12-1995	Ophir et al.			
	C	US-5840028-A	11-1998	Chubachi et al.			
	D	US-5785654-A	07-1998	Linuma et al.			
	E	US-5615680-A	04-1997	Sano			
	F	US-5462058-A	10-1995	Yamada et al.			
	G	US-6099471-A	08-2000	Torp et al.			
	H	US 6352507B1	03-2002	Torp et al.			
	I						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	J	WO 94/23652	10/27/94	PCT	A61B	8/12		
	K							



6-6-06

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	AA	Heimdal et al.: "Real-time Strain Velocity Imaging (SVI)" 1997 IEEE Ultrasonics Symposium Proceedings, vol. 2, 1997, pages 1423-1426.
	BB	Jackson et al.: "3-D Ultrasonic Imaging of Structure and Elasticity of the Carotid Bifurcation" IEEE Ultrasonic Symposium Proceedings, vol. 2, 1995, pages 1419-1422.
	CC	Kanai et al.: "Noninvasive Evaluation of local Myocardial Thickening and its Color-Coded Imaging" IEEE Transactions and Ultrasonics, Ferroelectrics and Frequency Control, vol. 44, no. 4, July 1997, pages 752-768
	DD	Tsutsui et al.: "Comparative Usefulness of Myocardial Velocity Gradient in Detecting Ischemic Myocardium by a Dobutamine Challenge" J. Am. Coll. Cardiol., vol. 31, 1998, pages 89-93.
	EE	McDicken et al.: "Colour Doppler Velocity Imaging of the Myocardium" Ultrasound in Med. & Biol., vol. 18, 1992, pages 651-654.
	FF	Palka et al.: "Differences in Myocardial Velocity Gradient Measured Throughout the Cardiac Cycle in Patients With Hypertrophic Cardiomyopathy, Athletes and Patients With Left Ventricular Hyperthropy Due to Hypertension" J. Am. Coll. Cardiol., vol. 30, 1997, pages 760-768.
	GG	Nowicki, et al.: "Assessment of Wall Velocity Gradient Imaging Using a Test Phantom" Ultrasound in Medicine and Biology, vol. 22, 1996, pages 1255-1260.
	HH	Uematsu, et al.: "Myocardial Velocity Gradient as a New Indicator of Regional Left Ventricular Contraction: Detection by a Two-Dimensional Tissue Doppler Imaging Technique" J. Am. Coll. Cardiol., vol. 26, 1995, pages 217-223.
	JJ	Fleming et al.: "Myocardial velocity gradients detected by Doppler imaging" The British Journal of Radiology, vol. 67, 1994, pages 679-688.
	KK	Hartley et al.: "Doppler Measurement of Myocardial Thickening with a Single Epicardial Transducer" Am. J. Physiol., vol. 245, 1983, pages H1066-H1072.
	LL	O'Donnell et al.: "Internal Displacement and Strain Imaging Using Ultrasonic SpeckleTracking," IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, vol. 41, No. 3, May 1994.
EXAMINER		DATE CONSIDERED 6-6-06
*EXAMINER: Initial citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

Note: IDS filed 11/10/2003 on signature page indicated that literature copies are enclosed however no copies were found in IFW to review.



Form PTO-1449 (Rev. 8-83) (modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 15-DS-000523 DIV2-1	SERIAL NO. 10/705,419
<b>INFORMATION DISCLOSURE CITATION</b> <i>(Use several sheets if necessary)</i>		APPLICANT(s): Torp, et al.	
		FILING DATE 11/10/2003	GROUP ART UNIT: 3737

*FEB 11 2005*

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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		4,534,357	08/13/85	Powers			
		4,780,837	10/25/88	Namekawa			
		5,046,500	09/10/91	Fehr			
		5,083,566	01/28/92	Tatsuro			
		5,109,856	05/05/92	Mangotte			
		5,183,047	02/02/93	Burckhardt			
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		5,457,754	10/10/95	Han, et al.			
		5,501,223	03/26/96	Washburn, et al.			
		5,615,680	04/01/97	Sano, et al.			
		5,876,341	03/02/99	Mao, et al.			
		5,524,636	06/11/96	Sarvazyan			

FOREIGN PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NO.	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES      NO
<i>JM</i>		EP 0509 760	10/21/92	EP			
		WO 99/17660	04/15/99	PCT			
<i>N</i>		EP 0931 508	07/28/99	EP			

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<i>JM</i>		BRANDS P J ET AL., "A noninvasive method to estimate pulse wave velocity in arteries locally by means of ultrasound," <i>Ultrasound In Medicine and Biology</i> , New York, NY, US 24(9):1325-1335 (December 1998)
<i>N</i>		BRODIN L-A ET AL., "New functional imaging options with echocardiography based on myocardial velocity curves," <i>Computers in Cardiology</i> 1998 Cleveland, OH, USA 13-16 Sept. 1998, New York, NY, USA, IEEE, US (13 September 1998) page 253-256

EXAMINER	<i>JM</i>	DATE CONSIDERED:
<i>6 - 6 - 06</i>		
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<i>MJ</i>		BRODIN L-A ET AL., "Echocardiographic Functional Images Based on Tissue Velocity Information," Herz, Urban Und Vogel, Muenchen, De. 23(8):491-498 (8 December 1998)	
		FLACHSKAMPF FRANK, ET AL., "Stress-Echokardiographie, Versuch einer Standortbestimmung" 94(9):A-523-A-528 (28 February 1997)	
		HEIMDAL A. ET AL., "Real-time strain rate imaging of the left ventricle by ultrasound," <i>J. Am. Soc. Echocardiography</i> , 11(11):1013-1019 (November 1998)	
		HEIN I.A., O'BRIEN D., "Current time-domain methods for assessing tissue motion by analysis from reflected ultrasound echoes – a review" <i>IEEE Transactions on Ultrasonics and Frequency Control</i> 40(2):84-102 (March 1993)	
		LEE S H ET AL., "Temporal analysis of regional synthetic M-mode to identify abnormal stress echocardiographic studies," <i>Computers in Cardiology</i> 1998 Cleveland, OH, USA 13-16 Sept. 1998, New York, NY USA, IEEE, US (13 September 1998), pages 241-244	
		NITZPON H J ET AL., "A New Pulsed Wave Doppler Ultrasound System to Measure Blood Velocities Beyond the Nyquist Limit," <i>IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control</i> , IEEE Inc. New York, NY US 42(2):1265-279 (1 March 1995)	
		NIXDORF UWE, ET AL., "Klinischer Stellenwert der Stressechokardiographie," <i>Deutsches Arzteblatt</i> , 94(25):A1723-A1728 (20 June 1997)	
		PESAVENTO A ET AL., "Time-efficient and exact algorithms for adaptive temporal stretching and 2D-correlation for elastographic imaging using phase information," <i>Ultrasonics Symposium 1998. Proceedings.</i> , 1998 IEEE Sendai, Japan 5-8 Oct. 1998, Piscataway, NJ, USA, IEEE, US (5 October 1998), pages 1765-1768	
		R. ALBIERO, A. VARIOLA, B. DANDER AND C. BUONANNO, "DIGITAL Stress-Echocardiography Using a Public Domain Program for the Macintosh Personal Computer," <i>Computers and biomedical Research</i> , 28:433-442 (December 1995)	
<i>V</i>		SHIMUZU, UEMATUS, NAKAMURA, MIYATAKE, "Peak Negative Myocardial Velocity Gradient in Early Diastole as a Noninvasive Indicator of Left Ventricular Dialstolic Function" <i>Journal of the American College of Cardiology</i> , 32(5):1418-1425 (1 November 1998)	

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*[Circular stamp: PCT/US03/04141]*

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
<i>[Signature]</i>		STALIDIS G ET AL., "Detection and modeling of infarcted myocardium regions in MRI images using a contour deformable model" <i>Computers in Cardiology</i> 1995, Vienna, Austria 10-13 Sept. 1995 New York, NY, USA, IEEE, US (10 September 1996), Pages 17-20	
		SUTHERLAND, KUKULSKI, VOIGHT, D'HOOGE, "Tissue Doppler Echocardiography: Future Developments" <i>Echocardiography</i> 16(5):509-520 (July 1999)	
		TANAKA N., OHTSUKI S., "Alias-free interpolation technique for pulsed Doppler signal," <i>Journal of the Acoustical society of Japan</i> , 14(4):259-265 (July 1993)	
<i>[Signature]</i>		URHEIM S, TORP H; EDVARDSEN T; OLSTAD B; RABBEN S I; HEIMDAL A; ANGELSEN B; SMISETH O A. "Myocardial strain rate imaging: Validation of a new Doppler method to quantify regional myocardial function" <i>Journal of the American College of Cardiology</i> , 33(2) Suppl. A., (February 1999) page 428A	

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